# 03050109-140

***(Ninety Six Creek)***

## General Description

Watershed 03050109-140 is located in Greenwood County and consists primarily of ***Ninety Six Creek*** and its tributaries. The watershed occupies 91,977 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Pacolet-Hiwassee series. The erodibility of the soil (K) averages 0.26 and the slope of the terrain averages 10%, with a range of 2-40%. Land use/land cover in the watershed includes: 70.9% forested land, 17.0% agricultural land, 10.6% urban land, 0.7% barren land, 0.4% forested wetland (swamp), and 0.4% water.

Six Mile Creek and Conally Branch drain into the headwaters of Ninety Six Creek. Henley Creek accepts drainage from Ropers Creek, Marion Creek (Marion Branch), and Tolbert Branch before draining into Ninety Six Creek near the Town of Ninety Six. Kate Fowler Branch enters Ninety Six Creek next followed by Wilson Creek. Rocky Creek (Turner Branch, Sample Branch) flows into Coronaca Creek near the Town of Coronaca, which in turn flows into Wilson Creek (Stockman Branch, Brightmans Creek) near the City of Greenwood. There are a total of 170.4 stream miles and 105.2 acres of lake waters in this watershed, all classified FW.

## Surface Water Quality

| Station # | Type | Class | Description |
|---|---|---|---|
| S-184 | BIO | FW | CORONACA CREEK AT SC 221 |
| S-092 | S/W | FW | CORONACA CREEK AT S-24-100, 4 MI NW OF NINETY SIX |
| S-233 | S/W | FW | WILSON CREEK AT S-24-101 |
| S-235 | S/W/BIO | FW | WILSON CREEK AT S-24-124 |
| S-856 | BIO | FW | NINETY SIX CREEK AT SR 42 |
| S-093 | P/INT | FW | NINETY SIX CREEK AT SC 702, 5.2 MILES ESE OF NINETY SIX |

***Ninety Six Creek –*** There are two SCDHEC monitoring stations along Ninety Six Creek. Aquatic life uses are partially supported at the upstream site ***(S-856)*** based on macroinvertebrate community data. At the downstream site ***(S-093)***, aquatic life uses are fully supported. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in turbidity suggest improving conditions for these parameters. Recreational uses are fully supported.

***Coronaca Creek –*** There are two SCDHEC monitoring stations along Coronaca Creek. Aquatic life uses are partially supported at the upstream site ***(S-184)*** based on macroinvertebrate community data. At the downstream site ***(S-092)***, aquatic life uses are not supported due to dissolved oxygen concentration and pH excursions, compounded by a significant decreasing trend in dissolved oxygen concentration. There is a significant decreasing trend in pH. Prior to 2001, this was a secondary monitoring station and sampling was intentionally biased towards periods with potentially low dissolved oxygen concentrations. Recreational uses are fully supported, and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

***Wilson Creek*** **-** There are two SCDHEC monitoring stations along Wilson Creek. Prior to 2001, these were secondary monitoring stations and sampling was intentionally biased towards periods with potentially low dissolved oxygen concentrations. Aquatic life uses are fully supported at the upstream site ***(S-233)***, but partially supported at the downstream site ***(S-235)*** based on macroinvertebrate community data. Significant increasing trends in dissolved oxygen concentration at ***S-235*** and decreasing trends in five-day biochemical oxygen demand, total phosphorus concentrations, and turbidity at both sites suggest improving conditions for these parameters. Recreational uses are fully supported at both sites, and significant decreasing trends in fecal coliform bacteria concentration suggest improving conditions for this parameter.

## NPDES Program

### *Active NPDES Facilities*

| ***RECEIVING STREAM*** / ***FACILITY NAME*** / ***PERMITTED FLOW @ PIPE (MGD)*** | ***NPDES#*** / ***TYPE*** / ***COMMENT*** |
|---|---|
| NINETY SIX CREEK<br>TOWN OF NINETY SIX WWTP<br>PIPE #: 001 FLOW: 0.50<br>PIPE #: 001 FLOW: 0.75, 1.0, 1.5 | SC0036048<br>MINOR DOMESTIC<br><br>PROPOSED |
| CORONACA CREEK<br>RURAL WATER/NORTHFALL ACRES SD<br>PIPE #: 001 FLOW: 0.0364 | SC0032191<br>MINOR DOMESTIC |
| WILSON CREEK<br>CITY OF GREENWOOD/WILSON CREEK WWTP<br>PIPE #: 001 FLOW: 12.0 | SC0021709<br>MAJOR DOMESTIC |
| WILSON CREEK<br>NINETY SIX CPW (PIER 96) WWTP<br>PIPE #: 001 FLOW: 0.06 | SC0042706<br>MINOR DOMESTIC |
| ROCKY CREEK<br>GREENWOOD MILLS, INC./HARRIS PLANT<br>PIPE #: 001 FLOW: 0.5 | SCG250118<br>MINOR INDUSTRIAL |
| BRIGHTMANS CREEK<br>GREENWOOD MILLS, INC./MATTHEWS PLT<br>PIPE #: C10, C11 FLOW: 0.10<br>PIPE #: F10, F11 FLOW: 0.50 | SCG250127<br>MINOR INDUSTRIAL |
| HENLEY CREEK<br>EXXON CO. USA/SOUTH POINTE<br>PIPE #: 001 FLOW: M/R | SCG830013<br>MINOR INDUSTRIAL |
| ROPERS CREEK<br>UNITED UTILITIES/HIGHLAND FOREST SD<br>PIPE #: 001 FLOW: 0.075 | SC0034444<br>MINOR DOMESTIC |

| | |
|---|---|
| KATE FOWLER BRANCH<br>GREENWOOD MILLS, INC./SLOAN PLANT<br>PIPE #: C10 FLOW: 0.10 | SCG250128<br>MINOR INDUSTRIAL |
| KATE FOWLER BRANCH<br>GREENWOOD MILLS, INC./ADAMS PLANT<br>PIPE #: C10, C11 FLOW: 0.10 | SCG250126<br>MINOR INDUSTRIAL |

## Nonpoint Source Management Program

### *Land Disposal Activities*

**Landfill Facilities**

| ***LANDFILL NAME***<br>***FACILITY TYPE*** | ***PERMIT #***<br>***STATUS*** |
|---|---|
| SOUTHERN BRICK LANDFILL<br>INDUSTRIAL | 243327-1601 (IWP-237)<br>-------- |
| SOUTHERN BRICK LANDFILL<br>INDUSTRIAL | IWP-002<br>-------- |

## Growth Potential

This watershed contains the Town of Ninety Six and portions of the Towns of Hodges, Cokesbury, Coronaca, and the City of Greenwood. There is a moderate potential for industrial growth in the Ninety Six-Greenwood area due to existing infrastructure and continued residential and commercial development.

## Watershed Protection and Restoration Strategies

### *Special Projects*

**Assessing Water Quality in the Saluda River Watershed**

Furman University has recently completed a three-year project that was to determine the sources of impairments on several tributaries and reaches of the Saluda River. These impairments include high fecal coliform counts detected in the watersheds of the Middle Saluda River, the South Saluda River, a small tributary to the Saluda River north of the Town of Pelzer, Broad Mouth Creek, Big Brushy Creek, the Bush River, Scotts Creek, and the Little River; high phosphorous concentrations found in the Bush River; low dissolved oxygen levels in **Coronaca Creek**; and an impaired macroinvertebrate community in Broad Mouth Creek. A stream sampling program was conducted in 2001, 2002, and 2003 with 182 sites sampled within the ten impaired areas. Each site was sampled from 3 to 7 times for water chemistry and for total coliform, *E. coli*, and heterotrophic bacterial counts. In addition, selected sites were sampled for fish abundance and diversity and for macroinvertebrate abundance and diversity.